

Addendum to

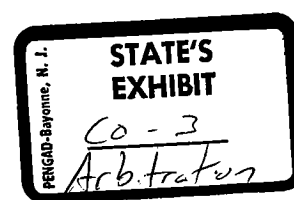
Reviewing the Assumptions, Methods and Results of:

Economic Impacts on Kansas of Diminished Surface Water Supplies to the Lower Republican River Basin
Caused by Nebraska in 2005 and 2006.

By

Dr. James Pritchett

4 March 2008



During the deposition on March 2nd, 2008 I asked to review information in Table 5 and Table 7 of my report. The request came in response to questions posed by Mr. John Draper.

Upon review, I find that I have made an error when preparing Table 5. In particular, when calculating the 2006 Total Revenue (Actual Irrigation) I used the 2005 IPYsym yields for the Below Lovewell area rather than the 2006 IPYsym yields for the Below Lovewell area. As an example, corn's total revenue in this row should be \$2.62 per bu * 142.6 bu. per acre to yield \$373.61 per acre. I offer the following alternative for Table 5 that corrects this mistake:

Table 5 (Alternative) Foregone profits for irrigated acres Below Lovewell

2005	<i>Alfalfa</i>	<i>Corn</i>	<i>Milo</i>	<i>Soybeans</i>
Total Revenue (Full Irrigation)	\$ 377.40	\$ 326.82	\$ 192.77	\$ 302.12
Total Revenue (Actual Irrigation)	\$ 362.60	\$ 296.49	\$ 190.23	\$ 278.72
Total Costs	\$ 377.30	\$ 413.83	\$ 166.45	\$ 274.53
Foregone Profit (\$/ac)	\$ 14.80	\$ 30.34	\$ 2.53	\$ 23.40
Crop Acres	1,687.61	12,563.30	1,195.39	7,687.99
Total Foregone Profit by Crop	\$ 24,976.60	\$ 381,145.52	\$ 3,029.12	\$ 179,899.01
Foregone Profit in 2005 (Total)	\$ 589,050.24			
2006	<i>Alfalfa</i>	<i>Corn</i>	<i>Milo</i>	<i>Soybeans</i>
Total Revenue (Full Irrigation)	\$ 540.80	\$ 440.95	\$ 320.96	\$ 309.92
Total Revenue (Actual Irrigation)	\$ 488.80	\$ 373.61	\$ 305.92	\$ 273.00
Total Costs	\$ 459.53	\$ 481.38	\$ 207.03	\$ 314.69
Foregone Profit (\$/ac)	\$ 52.00	\$ 67.33	\$ 15.05	\$ 36.92
Crop Acres	2,084.17	10,443.49	317.16	9,809.18
Total Foregone Profit by Crop	\$ 108,376.74	\$ 703,202.22	\$ 4,771.61	\$ 362,155.00
Foregone Profit in 2006 (Total)	\$ 1,178,505.57			

My error meant that the foregone profit (Below Lovewell) was understated. According to the assumptions in my analysis, these foregone profits should be \$1,178,505.57 rather than the previously reported \$861,577.06

An error was also made when calculating Table 7. In this case, the error was to apply the 2005 total costs of production for non-irrigated crops (\$ per acre) to the 2006 profit per acre calculations for non-irrigated crops. Instead, the 2006 total costs should have been used for non-irrigated crops. I offer the following alternative using the correct costs:

Table 7 (Alternative). Profit Difference of Irrigated Crop Production and Nonirrigated Production Above Lovewell (2006).

	Corn	Milo	Soybeans	Alfalfa	Sunflower	Ensilage	Wheat
Total Revenue	\$176.33	\$217.71	\$155.48	\$280.80	\$125.22	\$199.24	\$194.84
Total Costs	\$238.92	\$207.03	\$173.30	\$226.38	\$180.50	\$238.35	\$169.64
Profit per Acre	-\$62.59	\$10.68	-\$17.82	\$54.42	-\$55.28	-\$39.11	\$25.20
Crop Acres	858.7	2294.2	2332.7	512.7	166.6	64.1	6600.8
Total Profit by Crop	-\$53,751.91	\$24,502.52	\$41,568.61	\$27,900.05	-\$9,210.81	-\$2,506.49	\$166,306.02
Total Dryland Profits	\$111,670.77						
Foregone Irrigated Crop Production							
	Alfalfa	Corn	Milo	Soybeans	Sunflower	Ensilage	Wheat
Total Revenue	\$540.80	\$440.95	\$320.96	\$309.92	N/A	N/A	N/A
Total Costs	\$459.53	\$481.38	\$207.03	\$314.69			
Profit per acre	\$81.27	-\$40.43	\$113.93	-\$4.77			
Crop Acres	634.064	3177.212	96.488	2984.236			
Total Profit by Crop	\$51,530.38	-\$128,467.39	\$10,992.88	-\$14,234.81			
Total Potential Irrigated Profits	-\$80,178.94						
Difference Irrigated and Dryland Profits	-\$191,849.70						

Costs of production were higher in 2006 for nonirrigated crops when compared to 2005. When corrected, the nonirrigated profits were smaller than had been previously reported. However, these nonirrigated profits were still greater than the irrigated profits. Irrigated profits were negative. As with the original report, I have placed an economic loss of \$0 for the Above Lovewell area in 2006.

After correcting the errors in Table 5 and Table 7, the economic losses are calculated as \$589,050.24 in 2005 and \$ 1,178,505.57 in 2006. Total losses are then \$1,767,555.82.

Following the same procedure as in the original report, I multiply these direct effects by the multiplier 1.44 to quantify regional economic losses of: \$2,545,280.38.

Following the interest calculations posited in the initial report, I calculate the economic loss as in the following table:

	2005	2006
<i>Foregone Profits</i>	\$ 589,050.24	\$ 1,178,505.57
<i>Indirect Losses</i>	\$ 259,182.11	\$ 518,542.45
<i>Interest</i>	\$ 149,582.37	\$ 299,267.61
<i>Total Impact</i>	\$ 997,814.72	\$ 1,996,315.64
<i>Sum of Impacts</i>	\$ 2,994,130.36	

The total economic loss is then \$2,994,130.36.

Dr. James Pritchett

"Reviewing the Assumptions Methods and Results of: Economic Impacts on Kansas of Diminished Surface Supplies to the Lower Republican River Basin Caused by Nebraska in 2005 and 2006."

Documents and Sources used in Expert Testimony

1. Golden et al. Economic Impacts on Kansas of Diminished Surface Supplies to the Lower Republican River Basin Caused by Nebraska in 2005 and 2006.
2. USDA, National Agricultural Statistics Service. County Level Yield and Acreage Information. http://www.nass.usda.gov/QuickStats/Create_County_All.jsp
3. Kansas Agricultural Statistics Service (USDA-NASS), Agriculture Prices. Various Issues. http://www.nass.usda.gov/Statistics_by_State/Kansas/Publications/Economics_and_Misc/Price/2006/index.asp
4. Stone, L.R., A.J. Schlegel, A.H. Khan, N.L. Klocke, and R.M. Aiken. "Water Supply: Yield Relationships Developed for Study of Water Management." Journal of Natural Resources & Life Sciences Education. 2006. 35:161-173.
5. Kastens, T., K. Dhuvvetter, K. and T. Dumler. Background_KSU-NPI_CropBudgets(Jan2009) [http://www.agmanager.info/crops/budgets/proj_budget/Background_KSU-NPI_CropBudgets\(Jan2009\).pdf](http://www.agmanager.info/crops/budgets/proj_budget/Background_KSU-NPI_CropBudgets(Jan2009).pdf)
6. KBID Annual Reports – 2005 and 2006.
7. Kansas Farm Management Association Enterprise Summaries. <http://www.agmanager.info/KFMA/>